



# Software Developer

Software Developers in the Ocean Technology sector create and maintain applications for underwater exploration, marine research, and environmental monitoring. They build software solutions tailored to marine environments, working with data from sensors, navigation systems, and remotely operated vehicles. As a Software Developer in this field, you design and implement applications that help monitor ocean health, track marine species, and manage subsea equipment.



## JOB DUTIES

- Create and optimize software applications that support marine research, data collection, and underwater operations;
- Perform rigorous testing and debugging;
- Work closely with marine scientists, engineers, and data analysts to develop integrated solutions;
- Develop algorithms and applications for real-time data analysis;
- Update and maintain software systems to ensure compatibility with new technologies;
- Adhere to industry regulations and best practices, ensuring software supports sustainable practices and environmental protection; and
- Observe software performance in real-world conditions, making adjustments to enhance functionality and reliability.



## TECHNICAL SKILLS

- Programming Languages: Python, C++, Java;
- Data Processing and Analysis;
- System Integration with Marine Hardware;
- Software Testing and Debugging; and
- Real-Time Data Processing.



## EDUCATION

An undergraduate diploma or degree is typically required to become a software developer. Relevant fields of study include:

- Computer Science;
- Software Engineering;
- Electrical Engineering;
- Ocean Engineering; and/or
- Marine Emergency Duties (MED) Certification.
- Ocean Technology;

Additional training in areas like data analysis, machine learning, or marine software systems can be valuable assets for this role:

- The Esri ArcGIS Certification supports skills in GIS and spatial analysis;
- The Certified Kubernetes Administrator (CKA); and
- Courses that focus on programming languages (e.g., Python, C++, Java), data processing, and real-time systems are highly relevant.



## PERSONAL & PROFESSIONAL SKILLS

- Attention to Detail
- Problem-Solving
- Collaboration and Communication
- Project Management
- Critical Thinking
- Time Management
- Self-Motivation and Initiative



## WHERE TO WORK

Software Developers can find opportunities in various industries focused on marine exploration, environmental conservation, and underwater operations common employers include:

**Marine Research Institutions | Environmental Consulting Firms**  
**Offshore Oil and Gas Companies | Government Agencies and Regulatory Bodies**  
**Technology and Engineering Firms Specializing in Marine Applications**  
**Renewable Energy Organizations Focused on Offshore Projects | Defense and Security Organizations involved in Underwater Surveillance and Monitoring**